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ABSTRACT

Basic Training (BT) is designed to prepare recruits for their new role as members of the military. The psychological effects of this experience can have important implications for recruits' later effectiveness in the military. Locus of control is one psychological construct which can be important for overall psychological and behavioral adaptation and which also might change as a result of BT experiences. To evaluate the effects of BT on locus of control perceptions, Levenson's Internal, Powerful Others, and Chance control scales were administered to 256 Marine recruits prior to and at the end of BT. The results revealed that following BT the Powerful Others score increased significantly from 3.8 to 4.1 and the Internal Control score decreased significantly from 5.5 to 5.3. Chance control showed a consistent but nonsignificant decrease from 3.7 to about 3.5. The increase in Powerful Others score correlated with the recruits' perceptions of punishment and surveillance. The decrease in Internal Control score correlated with the recruits' perceptions of leadership and group support. These findings may improve understanding of locus of control issues and assist those involved in the design of BT programs. (Tables are included which list hypotheses tested and which define the social-environmental perceptions examined.) (NRB)

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Changes in Perceived Locus of Control during Basic Training

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Basic training (BT) is designed to prepare recruits for their new role as members of the military. In addition to learning basic military skills, the psychological effects of this experience can have important implications for recruits' later effectiveness in the military. Locus of control represents one type of psychological construct which can be important for overall psychological and behavioral adaptation (Lefcourt, 1982) and which also might change as a result of BT experiences.

To examine the impact of BT on locus of control, Levenson's (1981) "Internal," "Powerful Others," and "Chance" control scales were administered to Marine recruits prior to and at the end of basic training. Table 1 summarizes the major hypotheses about the impact of BT on locus of control. Hypothesis I was the prediction that beliefs about control by Powerful Others would increase over the course of training because a clearly identified set of individuals in positions of authority have an exceptionally large measure of control over a recruit's life.

Hypothesis II predicts that perceptions of control by Chance factors would decrease during basic training. Although the early phases of BT are often intended to appear somewhat arbitrary in nature, this pattern has been described as a means of unfreezing old behavior patterns, permitting new ones consistent with military roles to be incorporated. However, this apparently arbitrary atmosphere is confined to the first part of BT. The overall training process is highly structured with goals and appropriate behavior clearly defined and an emphasis put on skill development and professionalism. Therefore, beliefs about Chance

control should eventually decrease if the relative impact of the early somewhat arbitrary phase is overshadowed by the very clearly structured later phases of training.

As indicated by Hypothesis III, beliefs regarding Internal control could change in either direction during BT. Mastering the demands of BT gives recruits a sense of personal improvement arising from proficiency with new tasks, acquisition of new knowledge, and development of higher levels of physical fitness. These experiences could increase the recruits' sense of internal control. On the other hand, BT is unique for most young people withh regard to the degree of regimentation and loss of personal freedom. This aspect of the experience could lower a person's sense of internal control during BT.

We also examined the relationship between changes in locus of control and three other types of variables: leadership, group cohesion, and psychological stress. Specific variables in these categories were measured by scales with 3 to 8 Likert-type items. A brief definition of each scale is given in Table 2. As there is little research available assessing specific social-environmental correlates of changes in locus of control, these analyses were considered exploratory and no specific hypotheses were made. In general, however, more favorable perceptions of leadership, higher support, and lower stress were expected to be related to increases in internal and decreases in external control expectations.

These issues were explored in a longitudinal study of 256 recruits from four BT platoons formed at the Marine Corps Recruit

Depot in San Diego. Recruits completed Levenson's (1981) locus of control instrument prior to the start of training and just before graduation. The leadership and support variables were based on the average of four assessments made after each of the primary phases of training. The stress variables were based on the average of 12 weekly assessments made by recruits during training. Averages over the course of training were used to reflect individual differences in cumulative perceptions about the training experience.

The sample was split randomly into halves, and all analyses were performed separately for each subsample to replicate associations. Paired t-tests assessed overall group trends in locus of control. Residualized gain scores were computed to reflect individual changes in locus of control; and Pearson correlations between these gain scores and the leadership, support, and stress scales were computed to determine which social-environmental perceptions were related to changes in locus of control.

Table 3 shows the means, standard deviations, and paired t-tests for the control scales at the beginning and end of BT. Powerful Others control increased significantly from approximately 3.8 to 4.1. Internal control decreased significantly from approximately 5.5 to 5.3. Chance control showed a consistent but nonsignificant decrease from 3.7 to about 3.5. The results were similar in both subsamples, indicating that the findings were replicable.

The changes confirmed the hypothesis that Powerful Others control would increase over the course of training. This change may be little more than evidence of effective reality testing; however, it should be remembered that the items used in Levenson's Powerful Others scale are not specific to recruit training, implying that the expectations developed in BT are generalized beyond that environment.

The other results gave some support to the prediction of a decrease in beliefs about Chance control. Also, the ambiguous prediction for Internal control was resolved in favor of a decrease over training, suggesting that some individuals are having a stronger reaction to the loss of personal freedom and the regimentation of training than to the personal accomplishments that might enhance a sense of mastery and control.

The contrary trends for the two external locus of control scales represent a striking aspect of the findings. Powerful Others and Chance control are generally positively correlated, so they might be expected to show parallel changes rather than the opposite patterns we observed. These results further support the importance of distinguishing the two concepts.

Table 4 shows the correlations between changes in locus of control and the social-environmental measures which were significant in both subsamples at $p < .10$, 2-tailed. The actual values shown are the average of the two subsample correlations. The pattern of results indicates that increases in Internal control were related primarily to more favorable perceptions of

leadership and higher levels of perceived group support. Changes in Powerful Others control were generally independent of perceptions of the social environment. The one exception involved recruits' perceptions of punishment and surveillance by the drill instructors. Finally, larger than average decreases in beliefs about Chance control were related primarily to lower perceptions of stresses during training.

In summary, the different patterns of results in this study support the importance of differentiating among Internal, Powerful Others, and Chance control perceptions. The major results are as follows:

1. Internal locus of control decreased, on the average, during recruit training; however, this tendency was less pronounced among recruits with more positive perceptions of their leaders and higher levels of group cohesion.
2. Beliefs about control by Powerful Others increased, on the average, during training. This increase was apparently a response to the overall training experience rather than to any specific elements of the social environment.
3. Chance control tended to decrease, on the average, during training, but this tendency was less pronounced for recruits who experienced high levels of stress.

The findings from this exploratory investigation of changes in locus of control have both practical and theoretical implications. For those interested in designing programs to foster an Internal locus of control, the findings imply that attention must be given to developing a supportive, rewarding environment characterized by positive leadership; to lower feelings of Chance control the environment should minimize punitive, unfair, and deindividualizing experiences. From a theoretical perspective, the findings suggest that ascribing positive experiences to one's own efforts and negative experiences to Chance factors may be fundamental attributional tendencies which are critical to understanding the development of locus of control. These attributional tendencies may be the reason that Levenson's Internal control and Chance control scales are largely independent: i.e., the social-environmental perceptions that affect one dimension do not, in general, affect the other. Distinctions such as those indicated by these findings may help us better understand the locus of control construct and have important implications for promoting adaptive behavior.

References

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Table 1

Hypotheses Regarding Changes in Locus of Control Perceptions

Hypothesis I.

Perceptions of control by **Powerful Others** will increase over the course of boot camp training because individuals in positions of authority have an exceptionally large degree of control over recruits.

Hypothesis II.

Although initial phases of training may seem somewhat arbitrary, the overall training process is highly structured with goals and requirements clearly spelled out; therefore, beliefs about control by **Chance** should decrease over training.

Hypothesis III. (ambiguous predictions)

a. If meeting the demands of basic training gives one a sense of mastery and of personal competence, **Internal** control beliefs should increase.

Alternatively:

b. The degree of regimentation and loss of personal freedom imposed in basic training may lower one's sense of **Internal** control.

Table 2

Definitions of the Social-Environmental Perceptions Examined

Leadership

Leader Structure: The extent to which Drill Instructors provided means-end structuring in the form of detailing who was to do what and when.

Leader Support: The extent to which Drill Instructors communicated a concern for the well-being of the recruits and a respect for the platoon.

Leader Feedback: The amount of information that the Drill Instructors provided the platoon with regard to progress and future work requirements.

Drill Instructor Equity: The extent to which Drill Instructors did not treat all recruits the same and/or punished recruits for the mistakes of others or punished recruits even when they tried hard.

Referent Power: The extent to which Drill Instructors were regarded as setting a good example which the recruits wanted to copy.

Expert Power: The extent to which Drill Instructors were expert and knowledgeable in their job.

Reward Power: The amount of credit or reinforcement that Drill Instructors gave recruits for good performance.

Coercive Power: The extent to which Drill Instructors attempted to influence recruits by punishing poor performance.

Legitimate Power: The extent to which recruits felt they were bound by formal organizational rules to follow the orders of their Drill Instructors no matter what.

Group Cohesiveness

Group Support: The extent to which recruits in the platoon tried to make one another feel better when things were going bad and/or provided actual assistance on tasks that did not necessarily require teamwork.

Teamwork: The extent to which recruits cooperated with one another and worked as a team to get necessary tasks done.

Table 2 (continued)

Definitions of the Social-Environmental Perceptions Examined

Stress

Role Ambiguity: Not knowing clearly what behaviors were expected; being uncertain of what to do, how to do it, or why it had to be done.

Role Conflict: Receiving different, mutually exclusive orders with regard to tasks, goals, or procedures; being pressured by other recruits to do things differently than the Drill Instructors wanted.

Pressure: The extent to which there was more work to be done than could be accomplished in the time available; pressure and hurrying to get things done.

Punishment/Surveillance: The extent to which Drill Instructors quickly and consistently punished poor performance and were perceived as constantly watching the recruits to see if they made mistakes.

Loss of Autonomy: The extent to which discipline was extended to areas the recruit felt were not appropriate; lack of a feeling of responsibility and personal control over one's life.

Loss of Personal Integrity: The extent to which a person felt a loss of respect and recognition as a person.

Lack of Challenge: The extent to which a person felt that the work was boring and not challenging and that there were no opportunities to develop and show one's abilities and skills.

Table 3

Changes in Locus of Control during Recruit Training

		<u>Pre-Training</u>		<u>End of Training</u>		<u>T-Stat. (p)</u>
	<u>(n)</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	
<u>Internal</u>						
Subsample 1	(126)	5.57	0.70	5.29	0.81	3.71 (.001)
Subsample 2	(133)	5.49	0.70	5.32	0.75	2.56 (.011)
<u>Powerful Others</u>						
Subsample 1	(125)	3.86	1.07	4.10	1.12	2.57 (.011)
Subsample 2	(132)	3.83	1.06	4.14	1.13	3.14 (.002)
<u>Chance Control</u>						
Subsample 1	(126)	3.71	1.04	3.52	1.10	1.87 (.064)
Subsample 2	(133)	3.71	1.05	3.57	1.15	1.45 (.150)

Table 4

**Correlations* between Changes (Residualized Gain Scores) in
Locus of Control and Social Environmental Perceptions**

	<u>Gain in Control Beliefs:</u>		
	<u>Internal</u>	<u>Powerful Others</u>	<u>Chance</u>
<u>Leadership Variables</u>			
Leader Structure	.24	--	--
Leader Support	.28	--	--
Leader Feedback	.26	--	-.18
Drill Instructor Equity	.21	--	-.21
Referent Power	.28	--	--
Expert Power	.35	--	--
Reward Power	.32	--	-.21
Coersive Power	--	--	--
Legitimate Power	.23	--	--
<u>Support Variables</u>			
Group Support	.20	--	--
Teamwork	.23	--	--
<u>Stresses</u>			
Role Ambiguity	-.23	--	--
Role Conflict	--	--	.26
Pressure	--	--	--
Punishment/Surveillance	--	.24	.29
Loss of Autonomy	--	--	.29
Loss of Personal Integrity	--	--	.25
Lack of Challenge	-.20	--	.23

* The magnitude of association for a given variable pair is shown only if the subsamples both produced correlations significant at $p < .10$, 2-tailed. Values in the table are the average of the two subsample correlations.